

Amendments to the Specification:

Please replace the title on page 1, line 1, with the following amended title:

**INTRALUMINAL ~~CATHETER~~ GUIDEWIRE WITH HYDRAULICALLY COLLAPSIBLE
SELF-EXPANDING PROTECTION DEVICE**

Please replace paragraph [0011] on page 3, with the following amended paragraph:

[0011] In view of the foregoing, it should be appreciated that it would be desirable to provide an intraluminal ~~catheter~~ guidewire equipped with a hydraulically collapsible, self-expanding filter which provides predictable capture of emboli while at the same time overcoming the concerns associated with mechanical or hydraulically operated filter actuators.

Please replace paragraph [0012] on page 4, with the following amended paragraph:

[0012] According to an aspect of the invention there is provided an intraluminal ~~catheter~~ guidewire system, comprising a first tubular member having a proximal end and a distal end and having a fluid containing lumen therethrough. A medical device is coupled to the first tubular member proximate its distal end. A slave actuating member is coupled to the medical device and is slidably mounted proximate the distal end for longitudinal movement with respect to the first tubular member. A master actuating member is configured for longitudinal movement within the first tubular member proximate the proximal end. The master actuating member is hydraulically coupled to the slave actuating member.

Please replace paragraph [0014] on page 4, with the following amended paragraph:

[0014] According to a still further aspect of the invention there is provided an intraluminal ~~catheter~~ guidewire system, comprising a first tubular member having a proximal end and a distal end and having a fluid containing lumen therethrough. A medical device is coupled to the first tubular member proximate the distal end. A master actuating member is telescopically mounted within the lumen proximate the proximal end and is configured for longitudinal movement therein. A slave actuating member is telescopically mounted within the lumen proximate the distal end and is configured for longitudinal movement therein. The slave actuating member is coupled to the medical device and is hydraulically coupled to the master actuating member.

Please replace paragraph [0016] on page 5, with the following amended paragraph:

[0016] FIG. 1 illustrates a ~~catheter guidewire~~ having an intraluminal, self-expanding protection device proximate its distal end;

Please replace paragraph [0023] on page 5, with the following amended paragraph:

[0023] FIG. 8 illustrates a ~~catheter guidewire~~ having an intraluminal, self-expanding protection device in accordance with another embodiment of the present invention; and

Please replace paragraph [0024] on page 5, with the following amended paragraph:

[0024] FIG. 9 illustrates a ~~catheter guidewire~~ having an intraluminal, self-expanding protection device in accordance with yet another embodiment of the present invention.

Please replace paragraph [0026] on page 6, with the following amended paragraph:

[0026] Referring to FIG. 1, there is shown a ~~catheter guidewire~~ 10 incorporating a low-profile, intraluminal, self-expanding protection device 12 (e.g. a filter, occluder, etc.) at its distal end. ~~Catheter Guidewire~~ 10 comprises a flexible tubular body, for example hypotube 14, having a proximal end 16 and a distal end 18. Hypotube 14 has a central lumen 20 extending therethrough and preferably has a generally circular cross-section with an outer diameter of, for example, 0.01 inches to 0.04 inches and a length of, for example, 120 to 320 centimeters. It should be appreciated, however, that lumen 20 may have a constant diameter or may be provided with a cross-section that is, for example, triangular, rectangular, oval, or any other desirable cross-section.

Please replace paragraph [0027] on page 6, with the following amended paragraph:

[0027] Hypotube member 14 may serve as a guidewire and therefore must be structurally suitable so as to permit ~~catheter guidewire~~ 10 to be advanced through tortuous vasculature to distal arterial locations without buckling or kinking. Thus, hypotube 14 may be made of stainless steel or polymeric materials such as polyamide, polyimide, polyethylene, etc. Preferably however, hypotube 14 is manufactured using an alloy of titanium and nickel generally referred to as nitinol, and which may be comprised of approximately 50% nickel and the remainder titanium. Nitinol hypotubes are found to have sufficient guidewire-like properties and high resistance to buckling. For further details, the interested reader is directed to U.S. Patent No.

6,068,623 filed March 6, 1997 and entitled "Hollow Medical Wires and Methods of Constructing Same" the teachings of which are hereby incorporated by reference.

Please replace paragraph [0028] on page 6, with the following amended paragraph:

[0028] The distal end of ~~catheter guidewire~~ 10 is provided with an atraumatic, flexible and shapeable tip assembly 22 that comprises a tip 23 coupled to a coil 25 that is in turn coupled to distal end 18. For example, coil 25 may be attached to tip 23 and distal end 18 by any suitable method such as soldering, brazing, etc. Tip 23 and coil 25 may be made of, for example, stainless steel, or if desired, a radiopaque material such as an alloy of platinum to enable fluoroscopic monitoring of the tip assembly during an ~~intravascular~~ intravascular procedure. The proximal end of ~~catheter guidewire~~ 10 may be provided with a ~~catheter~~ valve and inflation assembly that comprises a sealing member 24 and a wire 26 which extends into the proximal portion of hypotube 14. A seal, not shown, is provided around wire 26 within the proximal portion of hypotube 14. As can be seen, the proximal portion of hypotube 14 is provided with an inflation port 28 that may be in turn coupled to a fluid inflation assembly 27 (e.g. a syringe). Inflation port 28 is in fluid communication with central lumen 20 in hypotube 14, thus providing an unrestricted fluid pathway between inflation port 28 and self-expanding protection device 12 for reasons to be further described below. Thus, by maneuvering member 24 and wire 26, the seal on wire 26 within the proximal portion of hypotube 14 either establishes or blocks the fluid pathway between inflation port 28 and distal end 18. For additional information regarding this inflation adapter, the interested reader is directed to U.S. Patent No. 6,325,777 issued December 4, 2001 and entitled "Low Profile Catheter Valve and Inflation Adapter". It should be understood, however, that other mechanisms are known for transmitting a fluid pressure to the distal end of hypotube 14 and would be suitable for use in conjunction with the present invention. The proximal end of hypotube 14 could, for example, simply be detachably coupled to a source of fluid pressure.

Please replace paragraph [0035] on page 10, with the following amended paragraph:

[0035] FIG. 8 illustrates a ~~catheter guidewire~~ having an intraluminal, self-expanding protection device in accordance with another embodiment of the present invention. In this embodiment, the fluid inflation assembly 27 including inflation port 28 shown in FIG. 1 is replaced by a proximal core segment 70 which may be an extension of wire 26 which extends into the proximal portion

of hypotube 14 as is shown. Proximal core segment 70 acts as a master actuator or plunger which is telescopically movable within the lumen of hollow shaft of hypotube 14. If desired, proximal core segment 70 may be provided with crimps or bends 72 as is shown in FIG. 9. The degree to which proximal segment 70 is bent at 72 is selected such that proximal segment 70 forms an interference fit within hypotube 20 to produce sufficient friction to hold segment 70 at a desired location within hypotube 20.

Please replace paragraph [0037] on page 10, with the following amended paragraph:
[0037] For example, if the hydraulic ~~catheter guidewire~~ system shown in FIGs. 8 and 9 is employed in conjunction with the embodiment shown in FIG. 5, the hydraulically transmitted pressure produced when the proximal core segment or master actuator 70 is pushed further into hypotube 20 is applied to the proximal surface of cap 34 causing plunger 32 to move in a distal direction. Thus, proximal core segment 70 performs as a master cylinder, and plunger 32 in FIG. 5 performs as a slave cylinder. As stated previously, since filter 13 has a proximal end coupled to hypotube 14 as is shown at 44 in FIG. 2, and has a distal end coupled to plunger 32 as is shown at 46, filter 13 is caused to collapse and assume the position shown in FIG. 3. This may be accomplished by moving proximal core segment 70 into hypo tube 20 by only a few millimeters. When the filter has been properly positioned within the patient's vascular, the proximal core segment 70 may be retracted removing the pressure on plunger 32 and allowing filter 13 to return to its preset shape as is shown in FIG. 2.

Please replace paragraph [0039] on page 11, with the following amended paragraph:
[0039] Thus, there has been provided an improved intraluminal ~~catheter guidewire~~ equipped with a hydraulically actuated medical device. The device is inserted into a patient's vasculature in a collapsed state due to hydraulic pressure applied to the medical device. When the device is properly positioned, the hydraulic pressure is removed, and the device returns to its original shape.

Please replace the Abstract of Invention paragraph on page 16, with the following amended paragraph:

An intraluminal ~~catheter~~ guidewire system comprises a first tubular member having a proximal end and a distal end and has a fluid containing lumen therethrough. A medical device is coupled to the first tubular member proximate the distal end. A slave actuating member is coupled to the medical device and is slidably mounted proximate the distal end for longitudinal movement with respect to the first tubular member. A master actuating member is configured for longitudinal movement within the first tubular member proximate the proximal end. The master actuating member is hydraulically coupled to the slave actuating member.